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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/582,495 06/27/00 OHGA

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HM12/0705

EXAMINER

REYES, H

ART UNIT

PAPER NUMBER

1623

DATE MAILED:

07/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/582,495

Applicant(s)

OHGA ET AL.

Examiner

Hector M Reyes

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1 to 14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 19 and 20 is/are allowed.
- 6) ☐ Claim(s) 1 to 14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Applicant's Information Disclosure Statement in Paper no. 3 and Applicant's Preliminary Amendment in Paper no. 4 is acknowledged. Applicant's election without traverse of claims 1 to 14, 19 and 20 directed to an ester and a group of esters, in Paper No. 6 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, -second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In general formula (1) of claim 1, the definition of R is not included and in the definition of the groups of the general formula (1), R5 is included but not assigned as a group in the general structure.

In claim 5, applicants claim "A process..... wherein the concentration of the unsaturated group-containing ester represented by general formula (1) *at the time of the hydrogenation reaction* thereof is on the range of 1 wt % -50 wt % based on the entirety of the raw material liquid containing the unsaturated group-containing ester." The phrase "at the time of the hydrogenation reaction" is not clear, since it could be at the initial time of the reaction or any other time.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

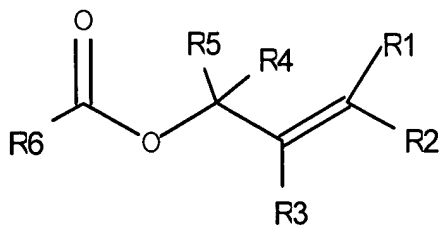
A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Aldrich Catalog, *Handbook of Fine Chemicals*, 1996-97.

Aldrich teaches the commercial availability of a variety of esters. Among them propyl acetate, propyl propionate, butyl acetate, butyl propionate, ethyl acetate, ethyl propionate (Aldrich Catalog, pages 263, 280, 667, 707, 1269, 1273).

Claims 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al, JP09-194427.

Tanaka teaches a method for the production of saturated esters by hydrogenation of unsaturated esters having the general formula (page 2):



Wherein R1 to R5 represent a hydrogen atom or any alkyl group having 1 to 10 carbon atoms which may be the same or different. R6 is a straight-chain or branched alkyl group having 1 to 10 carbon atoms (page 3).

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Tanaka teaches a process comprising:

- a hydrogenation reaction that can be carried out in liquid phase or gas phase, using a variety of reactors such as complete mixed tank, bubble tower, trickle bed and the like (page 8);
- the use of a variety of unsaturated esters in the hydrogenation reaction, among them: of allyl acetate, crotyl acetate, methallyl acetate, allyl propionate, crotyl propionate and methallyl propionate (page 3),
- the use of hydrogenation catalysts. Tanaka teaches that rhodium catalysts can be use in the hydrogenation process. However, the use of nickel and other metals such as Cu, Cr, Mg, and Al is more preferable because of the fact that rhodium is expensive (pages 5,7,8),
- a reaction temperature range from 30 to 200 °C (page 8,9),
- a method for the production of saturated esters like propyl acetate, butyl acetate, propyl propionate, butyl propionate among others (page 9).

Claims 1 to 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Jiang et al, Journal of Shanghai University of Science and Technology, no. 1, pages 81-87, 1987.

Jiang teaches:

- the hydrogenation of different unsaturated compounds using a catalyst comprising palladium (page 82),
- the catalytic hydrogenation of vinyl acetate in ethyl acetate as a solvent see table 3, page 84).

Allowable Subject Matter

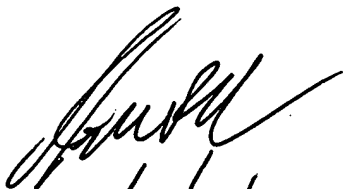
Claims 19 and 20 would be allowable if rewritten to overcome all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication should be directed to Hector M. Reyes whose telephone number is (703) 605-1153. The examiner can normally be reached on M to F 9am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Geist can be reached on (703) 308-1701. The fax number for the organization where this application or proceeding is assigned is (703) 308-4556 or for regular communication and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of the application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.


7/2/01


GARY GEIST
SUPERVISORY PATENT EXAMINER
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